

REMARKS/ARGUMENTS

Restriction/Election

The Office previously required election of a single invention between Group I (claims 1-20) and Group II (claim 21). The applicant confirms previous telephonic election of *Group I without traverse, reading on claim 1-20*.

Claim Objection

The Office objected to claim 14 for an informality. That applicant agrees and amended claim 14 accordingly.

35 USC § 112, second paragraph

Claims 11 and 20 were rejected under 35 USC § 112, second paragraph, as being indefinite for reciting "at least one of ethanol and carbon dioxide". The applicant disagrees. The patent office has long recognized such recitation as being definite as can be taken from issued U.S. Pat. Nos. 7,117,121, 7,132,355, 7,138,295, 7,087,794, and literally thousands of further patents.

35 USC § 102(b)

Claims 1-6, 8-11, and 14-20 were rejected under 35 USC § 102(b) as being anticipated by Taller et al. (Appl. Environ. Microb., 1989). The applicant respectfully disagrees, especially in view of the amendments made herein.

First, it should be noted that anticipation under 35 U.S.C. § 102 requires the presence in a single prior art disclosure of *each and every element of a claimed invention*. *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2D (BNA) 1051, 1053 (Fed. Cir. 1987); *Carella v. Starlight Archery*, 804 F.2d 135, 138, 231 U.S.P.Q. (BNA) 644, 646 (Fed. Cir.), *modified on reh'd*, 1 U.S.P.Q.2D (BNA) 1209 (Fed. Cir. 1986); [**7] *Jamesbury Corp. v. Litton Indus. Prods., Inc.*, 756 F.2d 1556, 1560, 225 U.S.P.Q. (BNA) 253, 256 (Fed. Cir. 1985); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 U.S.P.Q. (BNA) 481, 485 (Fed. Cir. 1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548, 220 U.S.P.Q. (BNA) 193, 198 (Fed. Cir. 1983).

Clearly, the elements "...a fermenting microorganism..." and the "...concentration effective to increase fermentation of the microorganism...", are neither present nor suggested in any manner. On the contrary, the reference merely teaches cytokinin production by a microorganism. It is further pointed out that the term "fermentation" is expressly defined in the specification (*i.e.*, refers to a process in which one or more substrates present in a fermentation medium are converted by a microorganism (or extract thereof) to a product). Similarly, the specification provides express definition for the term "increase fermentation" (*i.e.*, refers to an increase of a desired product in a fermentation as compared to a fermentation without a cytokinin-containing preparation, wherein at least a portion of the increase in fermentation is attributable to a cytokinin in the fermentation medium)

Furthermore, anticipation under Section 102 requires "the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in that claim*." *Panduit Corp. v. Dennison Manufacturing Co.*, 774 F.2d 1082, 1101, 227 U.S.P.Q. (BNA) 337, 350 (Fed. Cir. 1985) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548, 220 U.S.P.Q. (BNA) 193, 198 (Fed. Cir. 1983)).

Clearly, the cytokinin-containing medium is assayed using in a standard tobacco callus culture test, which has absolutely nothing to do with an increase of fermentation of a microorganism as presently taught.

With respect to the element of synthetic cytokinin of **claim 2**, it is unclear where the reference teaches use of such compound. With respect to the claimed concentration of at least 1.0 microM of **claim 5**, it is unclear where the reference teaches use of such compound (1 microM of kinetin is about 215 micrograms per liter, which is about 300-fold over what the reference teaches). With respect to the claimed cytokinin-containing preparation comprising a plant extract of **claim 6**, it is unclear where the reference teaches such preparation. With respect to the increase in AMP kinase activity of **claim 8**, it is unclear where the reference teaches use of such compound (literally or by inherency). With respect to the increased uptake of a carbohydrate into the microorganism of claim 9, it is unclear where the reference teaches use of such compound (literally or by inherency). With respect to the claimed microorganism being a yeast and a member of the genus *Saccharomyces* of claim 10, it is unclear where the reference teaches use of

such yeast. *Clarification is respectfully requested.*

Similarly, it is pointed out that the present method *claims expressly require a method of increasing fermentation of a microorganism*. It is again absolutely unclear how a callus culture test on a cytokinin containing medium would properly anticipate the instant claims. With further regard to dependent claims 17-20, the same arguments as provided above apply. *Clarification is respectfully requested.* Based on the above arguments and amendments, claims **1-6, 8-11, and 14-20** should not be deemed anticipated by Taller et al.

Claims 1-12, and 14-20 were rejected under 35 USC § 102(b) as being anticipated by Outterson. (Brewing Techniques, 1998). The applicant again respectfully disagrees, especially in view of the amendments made herein.

Again, it should be noted that the reference fails to teach a cytokinin at a concentration effective to increase fermentation of the microorganism in the fermentation medium. All the reference teaches is use of malt (which contains a cytokinin) in the process of beer brewing. However, the reference fails to teach any concentrations of the cytokinins, let alone a concentration that increases fermentation of the microorganism in the fermentation medium. On the contrary, *Outterson teaches that calcium and sodium chloride increases fermentation* (here: metabolizing complex sugars). Therefore, Outterson not only fails to teach the claimed elements, but actually teaches against the claimed subject matter. Consequently, **claims 1-12, and 14-20** should not be deemed anticipated by Outterson.

Claims 1-6, 8-11, and 14-20 were rejected under 35 USC § 102(b) as being anticipated by Prosper Nitro Active. (Product Guide). The applicant respectfully disagrees, especially in view of the amendments made herein.

Indeed, it is absolutely unclear how the office could assert such rejection. As the examiner stated in the office action, the formulation includes bacterial cultures for feeding the bacteria. First, it should be noted that - if anything - it is a bacterial culture and not cytokinins that feed other bacteria. Second, and as defined by the applicant in the present specification, the term fermentation is inconsistent with feeding other bacteria. Clarification is respectfully requested or the rejection should be withdrawn.

Claims 1-10, and 13-20 were rejected under 35 USC § 102(b) as being anticipated by Hickenbottom (Malt Products Corp.). The applicant again respectfully disagrees, especially in view of the amendments made herein.

The office is again reminded that a cited reference must teach each and every element as claimed. Applied to the instant case, the office seems to argue that the line "nutritive materials which promote vigorous yeast activity" would teach a cytokinin-containing preparation in the fermentation medium at at least 1.0 microMolar to thereby increase fermentation of a microorganism. Such assertion is entirely unsupported. Should the office insist of such argument, the applicant respectfully requests documentation that supports such statement. Otherwise, the rejection of claims 1-10, and 13-20 over Hickenbottom should be withdrawn.

In view of the present amendments and arguments, the applicant believes that all claims are now in condition for allowance. Therefore, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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